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The Environmental Consultancy

Andy Oberta is an asbestos guru -- and a former rocket scientist -- who holds the unique combination of Aeronautical Engineering and Master of Public Health degrees. He is an internationally-recognized expert on asbestos control, a field in which he has specialized since 1980. In addition to consulting and training services, he provides expert witness services for litigation related to the hazards and management of asbestos-containing materials. His experience includes many unusual, challenging and confidential projects, a few examples of which are on the following pages.

Mr. Oberta has over forty years of professional experience as an environmental consultant, having provided services in air pollution and industrial hygiene as well as asbestos consulting. He is Certified in Comprehensive Practice by the American Board of Industrial Hygiene and was licensed as an Asbestos Consultant in Texas from 1995 to 2017. Mr. Oberta is accredited according to EPA asbestos regulations as an Inspector, Management Planner and Project Designer for schools and for public, commercial and industrial buildings.

Mr. Oberta has served as President of the Environmental Information Association (the former National Asbestos Council), and also as an officer and director. He received the Jack Snider, Jr. Lifetime achievement award from EIA in 2006. Mr. Oberta is the author of the ASTM Manual on Asbestos Control: Surveys, Assessment, Abatement and Maintenance -- 3rd Edition as well as the first and second editions published in 1995 and 2005. He is the Technical Contact for four asbestos control standards under the jurisdiction of ASTM Sub-committee D22.07 on Sampling and Analysis of Asbestos and has co-chaired sessions at the triennial D22.07 Johnson Conference. Mr. Oberta received the Award of Merit from Committee D22 in April 2016 for his service to ASTM International. He also chaired the American Industrial Hygiene Association Asbestos subcommittee and was elected an AIHA Fellow in 2007.

Prior to entering the environmental field, Mr. Oberta worked in the aerospace industry on rocket propulsion and interplanetary spacecraft programs. His primary contributions were in the development of large solid rockets and in the fields of planetary quarantine and contamination control. Early in his career, he was a member of the American Rocket Society.

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Detailed descriptions of the examples of his experience start on the next page

Asbestos consulting for church schools.....

A school system operated by a Conference of churches is subject to the EPA AHERA requirements for asbestos management. I conducted three-year re-inspections and initial inspections in twenty-two schools, finding asbestos-containing materials in eleven schools. While complying with the AHERA assessment requirements, I also used the quantitative protocol in the ASTM E2356 Standard Practice for Comprehensive Building Asbestos Surveys. I documented my findings in a narrative report, tables of inspection and sampling results, Operations and Maintenance plans and floor plans, and prepared current versions of the Management Plans. The reports were submitted as electronic files as well as the hard copy required by EPA, and posted on a website that I created for the Conference.

One of the school complexes consists of nine high-school buildings and two elementary-school buildings. My findings included asbestos floor tile under carpet that had not been previously identified in two buildings and asbestos-containing textured finish on ceilings in two other buildings. The Conference accepted my recommendation, based on assessments according to the ASTM E2356 standard, to have the ceilings removed. I managed the abatement project as their representative, conducting the Project Design Survey, soliciting proposals and overseeing the work of the selected contractor. Because work was proceeding in both buildings simultaneously I retained the services of a licensed project monitor for on-site PCM analysis and assistance with visual inspections (according to ASTM E1368) and air sampling. Final clearance samples were analyzed by TEM as required by AHERA regulations and no asbestos structures were detected.

Immediately prior to this project I managed an abatement project to remove carpet and underlying floor tile in another school operated by the Conference. ASTM E1368 visual inspections and TEM analysis of clearance samples were also used on this project.

Some of the school buildings are free-standing while others are physically attached to the church buildings. Some of the spaces used by the school and therefore subject to AHERA are also used for church functions, and are cleaned, maintained and even renovated by church volunteers. This situation poses challenges to compliance with AHERA and OSHA regulations for O&M and communication programs.

Asbestos consulting services for the above schools are on-going including three-year re-inspections. In addition I have assisted a six-building church school in coming into compliance with the AHERA regulations and inspected a large church building that will be used as a charter school in the near future.

Comprehensive Asbestos Survey of Gypsum Plant

The plant is located next to a gypsum mine and currently produces gypsum powder for numerous industrial and commercial applications. The main building, in which wallboard was formerly manufactured, measures over 700 ft long and 200 ft wide, with multiple levels on the end where production operations are now conducted.

The building exterior and some interior walls consist of corrugated asbestos-cement panels – commonly called Transite – that are in good condition with some damage. (The damage in the video

was repaired). Inside the building, pipe insulation was mostly fiberglass with a few damaged asbestos fittings. Samples of insulation from a hopper located on a roof contained asbestos, as did pipe hanger insulation in two smaller buildings on the property.

My report included assessments of Current Condition and Potential for Disturbance for confirmed asbestos-containing materials according to ASTM E2356 that were plotted as a graphical tool for decision-making by plant management. The plant has an effective asbestos management plan in place and uses the services of an experienced abatement contractor with whom I dealt over twenty years ago.

University of Vermont asbestos management program...

I have been a consultant to the University of Vermont since 2002, when I conducted an in-depth audit of their asbestos management program. In 2005 I returned to the University for an additional review of their program and updated the results of the audit. During this visit I trained the Asbestos Program staff and consultants on the use of the ASTM asbestos control standards for which I am responsible. The Training and Compliance Office performs abatement with its own personnel, makes extensive uses of contractors and consultants, and has to comply with state asbestos regulations.

I assisted the Training and Compliance Office in the installation of the Customized Compliance Program for Asbestos for management of asbestos-containing materials in campus facilities. This work involved the importation of survey data from the extensive database maintained by TCO into the CCPA format, supported by collection and confirmation of survey data by TCO staff. I was responsible for creating the web pages that form the basic architecture of the CCPA and uploading them for access by campus users as well as TCO staff. The CCPA provides information about the locations of asbestos-containing materials in campus buildings and precautions to avoid disturbing them, as well as satisfying communication requirements for staff and contractors. TCO has access to enhanced risk assessment and budgeting tools for asbestos management through the CCPA. Information has been posted for four buildings, including a six-floor historic building with 187,000 ft² of floor space.

Paper mill asbestos program audit....

A forest products concern retained me to audit the asbestos management program at one of their mills. A consultant had taken over 30,000 bulk samples of thermal system insulation since the mid-1990s and compiled the information in a database. Even with that amount of data, contractors were still encountering unidentified ACM fairly recently. My assignment was to analyze the database and recommend how its reliability could be improved and it could be used more efficiently. Over a four-month period that included a visit to the mill, I produced two reports that detailed quality control problems with the database, including mis-identification of samples and uncertainties in the identification of materials in multi-layer samples. I made recommendations for eliminating unnecessary information in the database and reorganizing the remainder as well as improving the way the information was displayed for the user. Suggestions were also made to improve the markings on pipes and tanks with which ACM was distinguished from non-ACM.

Asbestos mines in South Africa....

A colleague conducted field studies of contamination in communities near the asbestos mines and mills in four province of South Africa under a contract from the Department of Environmental Affairs and Tourism. I reviewed his study protocols and progress reports and also provided support for

analysis of air, soil and building material samples by laboratories in the US. The exposure of residents in villages adjacent to the mines, where asbestos mills and disposal sites were also located, was evaluated on the basis of over 2,000 bulk samples collected by commnity activists trained for this study. A risk analysis model in the study report prioritizes remediation of the sites. Another study objective was to develop and validate a method of evaluating soil contamination by visual examination consistent with the limited analytical resources of South Africa and less-developed countries.

Asbestos consulting for Alcoa....

I provided consulting services to Alcoa's Rockdale, TX operations and to their corporate EHS staff. The Asbestos Survey document that I revised extensively for Rockdale was adopted at the corporate level and I contributed to the revision of other Alcoa asbestos management documents.

When Alcoa acquired the assets of Reynolds Aluminum, the Sherwin alumina refinery in Ingleside, TX was divested and the transaction required an estimate of asbestos abatement costs for the facility. I performed this study using the survey data provided by the plant's asbestos consultant and applied factors for condition and disturbance of the asbestos-containing materials on various components.

When Alcoa acquired the Howmet manufacturing plants in the US and Canada, I was asked to assist the corporate staff with bringing these plants into compliance with Alcoa's asbestos policies. I arranged to have the plants surveyed according to a specification and solicitations that I sent to asbestos consulting firms with offices near the plants. After the surveys were performed, I reviewed the reports and offered additional advice to the plant staff on interpreting the information. Besides my extensive experience in conducting asbestos surveys and preparing O&M plans, the most important factors in the success of this program were my personal contacts and reputation within the asbestos consulting community and my ability to manage a complex technical effort of this magnitude.

El Paso Electric consulting and training...

I was a consultant to El Paso Electric from 2000 - 2011. My initial assignment was to assist the Environmental Affairs Department in updating their asbestos management program and documentation, followed by asbestos awareness training for all employees in the powerplants, transmission and distribution, and others who might come in contact with asbestos-containing materials in the course of their work. During this time I advised the company on methods of reducing exposure during asbestos gasket cutting and removal operations.

In 2009 I was asked to review personal air sampling and qualitative settled dust sampling results for one of their power plants with damaged asbestos-containing pipe insulation. This led to a site visit where I took quantitative settled dust samples using the ASTM D5755 microvac method, and 40% of these settled dust samples were shown by the ASTM D7390 Dust Guide to be statistically significant from background, as was the ensemble of the entire data set. I prepared cleaning and maintenance procedures that would minimize the disturbance of the contaminated dust. In 2004 the company asked me to develop a procedure for inspecting cables in Transite ducts encased in buried concrete slabs when damage may occur during excavation by contractors. I trained workers annually on this procedure and also provided respirator training and fit testing. One of the hands-on exercises is shown in the picture using a simulated slab and buried (non-asbestos) ducts). The procedure that the workers are trained on has been incorporated as an appendix in the ASTM E2394 Standard Practice for Maintenance, Renovation and Repair of Installed Asbestos Cement Products.

Asbestos abatement project...

A distributor of industrial and consumer products has two large warehouses in Austin, Texas. The asbestos surveys I conducted confirmed the presence of asbestos-containing fireproofing in a 20,000 ft² section of one of the warehouses. I prepared an abatement project design and assisted the building owner in soliciting proposals for abatement of the fireproofing. Because the fireproofing was on structural elements from fifteen to forty feet above the floor, safety was a paramount consideration.

I managed the abatement project as the owner's representative, providing oversight of the work done by the abatement contractor and a project monitoring firm. Preparation and removal involved elevated work on mobile man-lifts in large negative pressure enclosures. My specification required compliance with ASTM E1368, Standard Practice for Visual Inspection of Asbestos Abatement Projects, and the project monitoring firm operated an on-site laboratory for expeditious processing of final clearance air samples. The project was completed ahead of schedule and within the budgetary expectations of the client.

Consultant to General Services Administration...

The owner had purchased a 100,000 ft² building in which GSA had specified the installation of vinyl-asbestos floor tile and asbestos-containing ceiling tiles. The building had been leased to the VA and the owner sought to have GSA reimburse him for removing the floor tile and ceiling tiles. At the time of my inspection the floor tile and ceiling tiles had been removed but the asbestos-containing mastic remained. Using drawings, specifications and other contractual documents provided by GSA, I reconstructed the renovation history of the building to estimate when and where asbestos-containing materials were installed and removed over a 35-year period. At a hearing before a GSA Administrative Law Judge, I presented my findings and participated in discussions to establish the compensation agreed upon by GSA and the owner.

Operations and Maintenance in Vermiculite Exfoliation Plant

Equipment that processed Libby vermiculite until 1986 is installed in an area of a building whose walls and roof deck are corrugated asbestos-cement (Transite). The equipment is currently used to process vermiculite concentrate from South Carolina. Microvac samples (ASTM D5755) were taken from the inside surfaces of the Transite walls and the underside of the roof deck. One sample result was 15,000,000 asbestos str/cm², the highest ever recorded by the laboratory.

Air samples were taken to determine if the vibration from the processing equipment was releasing fibers from the surfaces of the Transite. Analysis by TEM showed an average fiber concentration of 0.0012 f/cc for PCMe fibers (>5µm long) and 0.0017 f/cc for fibers > 0.5 µm long.

The air samples also showed an average concentration of 0.0027 f/cc for Libby amphiboles that originated from residual Libby vermiculite dust remaining in the building. Of the five microvac samples of wall surfaces underneath the accumulated dust, three had one or no Libby amphiboles and the highest was 156,000 Libby amphiboles /cm².

An Operations and Maintenance plan was prepared to manage the Transite roofing and siding, and also the accumulated dust that was protecting the residual Libby amphiboles. The plan prohibits plant personnel from cutting or otherwise disturbing the Transite, and prohibits contact with dust on the walls to preclude disturbing the underlying residual Libby amphiboles. Regular cleaning of plant equipment remains a part of operations. A sign was posted in the supervisor's office illustrating the Transite and dust and identifying their locations. Awareness training was provided to plant employees to familiarize them with the elements of the O&M program.

Asbestos contamination in Northern Israel...

From 1952 to 1997, a plant in northern Israel manufactured asbestos-cement pipe and sheet products, using chrysotile, crocidolite and amosite asbestos fiber. Worker exposure to these fibers has resulted in high rates of asbestos-related diseases. The waste material from the manufacturing process is both friable and non-friable, and was disposed of in a manner that contaminated property inside and outside the plant boundaries, as well as residential areas in the community.

I served as a consultant to the Ministry of the Environment on this problem and spent two weeks in Israel inspecting the affected areas and meeting with the parties involved. Specific aspects of the problem include construction of an amusement park on contaminated land, clean-up of an adjacent contaminated beach, and the use of these areas for recreational purposes.

Subsequent to my visit, construction was stopped on the amusement park and never resumed. One of my recommendations was implemented that public access to the beach and roadway through the site be prohibited. Contaminated soil was removed from along the plant property fence line and a plastic membrane laid down and covered with clean soil. The production equipment was removed from the plant and the remaining product and waste material disposed of in a landfill.

Work practices for non-friable materials...

There are numerous types of non-friable asbestos-containing materials in postal facilities, including vinyl asbestos tile, asbestos asphalt plank and asbestos-cement (Transite) panels. I conducted a two-day course for the Postal Service that covered the fundamentals of asbestos awareness and respiratory protection, described seven drilling and repair procedures and included hands-on exercises where all attendees practiced the procedures on non-asbestos materials. The procedures have been shown to keep worker exposure well below the OSHA Permissible Exposure Limits by using wet methods without the need for HEPA-filtered vacuum cleaners.

These materials are also prevalent in telecommunications facilities and in customer's buildings including residential structures where equipment must be installed and removed. I have conducted classes of shorter duration for the telecommunications industry using the same methods as for the Postal Service. I have also presented these methods at conferences for flooring contractors and the utility industry.
